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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/525,674	02/24/2005	Burkhard Kroger	13111-00002-US	3744

23416 7590 11/17/2005

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EXAMINER

MEAH, MOHAMMAD Y

ART UNIT

PAPER NUMBER

1652

DATE MAILED: 11/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/525,674	KROGER ET AL.	
	Examiner	Art Unit	
	Mohammad Meah	1652	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02/24/05.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-16 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The claims 1-16 are pending in the instant office action

Election/Restrictions

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claims 1-14, drawn to a method of production of sulfur containing chemical via microbial fermentation comprising enzyme encoding gene.

Group II, claims 15-16, drawn to processes of production of animal feed additive containing L-methionine and other biomass via microbial fermentation.

3. The inventions listed as Groups I-II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

Methods in groups I and II are different methods involve distinct steps for the processes to produce different products, such as sulfur containing fine chemicals (group I) and animal food (group II).

Furthermore, the technical feature linking group I-II appears to be that they all relate to microbial production of L-methionine. This type of microbial production of L-methionine does not constitute a "special technical feature" as defined by PCT Rule 13.2, because it does not claim a feature, which defines a contribution over the prior art, as this type of microbial production of L-methionine is known thorough (US PAT 5840551 and USPGPUB US 2005/0089975 A1).

For each of inventions in groups I-II above restriction to one of the following is also required under 35 U.S.C. 121 and 372. Therefore election is required of

- (1) Protein of SEQ ID NO: 2 or Nucleic acid encoding SEQ ID NO: 2. or DNA of SEQ ID NO: 1.
- (2) Protein of SEQ ID NO: 4 or Nucleic acid encoding SEQ ID NO: 4. or DNA of SEQ ID NO: 3.
- (3). Protein of SEQ ID NO: 6 or Nucleic acid encoding SEQ ID NO: 6. or DNA of SEQ ID NO: 5.
- (4). Protein of SEQ ID NO: 8 or Nucleic acid encoding SEQ ID NO: . or DNA of SEQ ID NO: 7.
- (5). Protein of SEQ ID NO: 10 or Nucleic acid encoding SEQ ID NO: 10. or DNA of SEQ ID NO: 9.
- (6). Protein of SEQ ID NO: 12 or Nucleic acid encoding SEQ ID NO: 12. or DNA of SEQ ID NO: 11.
- (7). Protein of SEQ ID NO: 14 or Nucleic acid encoding SEQ ID NO: 14. or DNA of SEQ ID NO: 13.
- (8). Protein of SEQ ID NO: 16 or Nucleic acid encoding SEQ ID NO: 16. or DNA of SEQ ID NO: 15.

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- (9). Protein of SEQ ID NO: 18 or Nucleic acid encoding SEQ ID NO: 18. or DNA of SEQ ID NO: 17.
- (10). Protein of SEQ ID NO: 20 or Nucleic acid encoding SEQ ID NO: 20. or DNA of SEQ ID NO: 19.
- (11). Protein of SEQ ID NO: 22 or Nucleic acid encoding SEQ ID NO: 22. or DNA of SEQ ID NO: 21.
- (12). Protein of SEQ ID NO: 24 or Nucleic acid encoding SEQ ID NO: 24. or DNA of SEQ ID NO: 23.
- (13). Protein of SEQ ID NO: 26 or Nucleic acid encoding SEQ ID NO: 26. or DNA of SEQ ID NO: 25.
- (14). Protein of SEQ ID NO: 28 or Nucleic acid encoding SEQ ID NO: 28. or DNA of SEQ ID NO: 27.
- (15). Protein of SEQ ID NO: 30 or Nucleic acid encoding SEQ ID NO: 30. or DNA of SEQ ID NO: 29.
- (16). Protein of SEQ ID NO: 32 or Nucleic acid encoding SEQ ID NO: 32. or DNA of SEQ ID NO: 31.
- (17). Protein of SEQ ID NO: 34 or Nucleic acid encoding SEQ ID NO: 34. or DNA of SEQ ID NO: 33.
- (18). Protein of SEQ ID NO: 36 or Nucleic acid encoding SEQ ID NO: 36. or DNA of SEQ ID NO: 35.
- (19). Protein of SEQ ID NO: 38 or Nucleic acid encoding SEQ ID NO: 38. or DNA of SEQ ID NO: 37.

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(20). Protein of SEQ ID NO: 40 or Nucleic acid encoding SEQ ID NO: 40. or DNA of SEQ ID NO: 39.

(21). Protein of SEQ ID NO: 42 or Nucleic acid encoding SEQ ID NO: 42. or DNA of SEQ ID NO: 41.

(22). Protein of SEQ ID NO: 44 or Nucleic acid encoding SEQ ID NO: 44. or DNA of SEQ ID NO: 43

(23) Protein of SEQ ID NO: 46 or Nucleic acid encoding SEQ ID NO: 46. or DNA of SEQ ID NO: 45.

Each protein having unique SEQ ID NO of (1)-(23) above is distinct compound since the amino acid sequence of a protein determines its structural and functional properties. Therefore each of above proteins has their special technical feature.

And also if applicants elect Group I applicants are required to select one specific gene from:

- a) the gene lysC, which encodes an aspartate kinase,
- b) the glyceraldehyde-3-phosphate dehydrogenase-encoding gene gap,
- c) the 3-phosphoglycerate kinase-encoding gene pgk,
- d) the pyruvate carboxylase-encoding gene pyc,
- e) the triose phosphate isomerase-encoding gene tpi,
- f) the methylene tetrahydrofolate reductase-encoding gene metF,

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- g) the cystathionine gamma-synthase-encoding gene metB,
- h) the cystathionine gamma-lyase-encoding gene metC,
- i) the serine hydroxymethyltransferase-encoding gene glyA,
- j) the O-acetylhomoserine sulfhydrylase-encoding gene metY,
- k) the vitamin B₁₂-dependent methionine synthase-encoding gene methH,
- l) the phosphoserine aminotransferase-encoding gene serC,
- m) the phosphoserine phosphatase-encoding gene serB,
- n) the serine acetyltransferase-encoding gene cysE
- o) the gene hom, which encodes a homoserine dehydrogenase

Each gene encoding specific enzyme as listed above (a)-(o) is distinct compound since each enzyme has its distinct structural and functional properties. Therefore each of above gene has their special technical feature.

And also if applicants elect Group I, applicants are required to select one specific gene from:

- a) the homoserine kinase-encoding gene thrB
- b) the threonine dehydratase-encoding gene ilvA
- c) the threonine synthase-encoding gene thrC
- d) the meso-diaminopimelate D-dehydrogenase-encoding gene ddh
- e) the phosphoenolpyruvate carboxykinase-encoding gene pck
- f) the glucose-6-phosphate 6-isomerase-encoding gene pgi
- g) the pyruvate oxidase-encoding gene poxB

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- h) the dihydrodipicolinate synthase-encoding gene dapA
- i) the dihydrodipicolinate reductase-encoding gene dapB
- j) the diaminopicolinate decarboxylase-encoding gene.

Each gene encoding specific enzyme as listed above (a)-(j) is distinct compound since each enzyme has its distinct structural and functional properties. Therefore each of above gene has their special technical feature.

4. In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.
5. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement is traversed (37 CFR 1.143).

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohammad Meah whose telephone number is 571-272-1261. The examiner can normally be reached on 8:30-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ponnathapu Achutamurthy can be reached on 571-272-0928. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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